Istituto Universitario
di Studi Superiori di Pavia

Università degli Studi
di Pavia

The Third International ROSE School Seminar

Pavia 23-24 June 2003

ROSE
SCHOOL

European School
for Advanced Studies
in Reduction
of Seismic Risk

• THE ROSE SCHOOL

The European School of Advanced Studies in Reduction of Seismic Risk (ROSE) was founded in the autumn of 2000, with the aim of providing higher-level education in the field of earthquake engineering. The syllabus offers a comprehensive set of subjects covering applied mechanics, structural engineering, earthquake engineering, engineering seismology and soil dynamics, with emphasis on both theoretical background and design considerations.

Each course is intensively taught in a period of four to six weeks, during which the respective lecturer is able to fully dedicate his/her time and efforts exclusively to the scholastic activities at the school, thus ensuring teaching and research training at the highest possible levels of quality. The School also relies on advanced numerical and experimental facilities, including the large structural laboratory of the University of Pavia. Academic activities take place in a number of dedicated classrooms and computer labs, located within the same building complex where all students are hosted.

All of the above endows a truly unique character to the ROSE School, be it for its fully international nature or for its innovative organisation in education and research training in the field of Earthquake Engineering.

• INTERNATIONAL ROSE SCHOOL SEMINARS

As a part of the ROSE program, an International seminar is organised every year, to provide the School students with an opportunity to present and discuss their research work to an audience of international experts. An exception to this rule was made in the First International ROSE School Seminar where, for obvious reasons, there were no students at an advanced stage of their studies, and hence a special forum dedicated to some of the most controversial current issues in earthquake engineering was organised instead.

In addition to standard presentations on research work carried out at the School, the annual Seminars feature also the tradition of inviting a prominent scientist to deliver a keynote lecture on a given contemporary and highly relevant topic in the field of Earthquake Engineering. At this year's event, such keynote address will be delivered by Dr. David M. Boore (U.S. Geological Survey) and is titled "Can site response be predicted?".

It is also foreseen that all contributions to the seminar will be published, after a standard review process, in a special issue of the *Journal of Earthquake Engineering*, which will be distributed to all participants and journal subscribers in the beginning of the year 2004. Copies of the JEE Special Issues containing the proceedings of the two previous editions of this annual Seminar are available from the ROSE School Secretariat, on request.

• ATTENDING THE EVENT

As in its previous editions, a large number of the ROSE Faculty members, listed overleaf, will be attending the Seminar, ensuring a lively and entertaining workshop. Further, it is noted that relatively extended times are allocated for the presentation of each paper, so that in-depth and highly technical discussions can take place.

In addition to ROSE faculty and students, a maximum of 50 external participants may also be accepted, for which reason professionals and researchers worldwide are encouraged to take part in the event. A 160_ fee is required from external attendees, to cover for the cost of coffee/lunch breaks, seminar dinner and proceedings. Special financial conditions are, however, in place for University researchers or students, to whom a fee of not more than 120_ is usually requested.

Those who wish to attend the Seminar are kindly invited to compile and submit the registration form to the ROSE School Secretariat, at the address given overleaf. If you need assistance of any kind (registration form, accommodation, travelling directions, etc.), please do not hesitate in contacting our Administrative Officer, Ms. Sandra Castelli (rose@unipv.it). You may also refer to the ROSE website for further information on all ROSE School activities.

• VENUE

The ROSE School is located at the Collegio Alessandro Volta, in Pavia, a historical town in the North of Italy (35 km from Milan), full of university tradition and fame. The Collegio itself, however, is a recent facility, opened in the year 2000, featuring combined teaching and residential facilities. All Seminar activities will therefore take place within the School's facilities, more specifically at its main amphitheatre (Aula Magna).

• POST-SEMINAR ACTIVITIES

As part of its PhD admission procedure, a written/oral examination takes place, once a year, at the ROSE School. The scheduling of such exam is always made to coincide with the week of the International Seminar, so as to capitalise on the contemporaneous presence of a large number of the School's academic staff. The 2003 PhD entry written examination will take place on the morning of Wednesday 25, whilst oral interviews will be conducted on Friday 27. All ROSE School faculty members are invited to take part.

In addition, the following presentation will take place on the afternoon of Wednesday 25:
A. Elnashai, The US Network for Earthquake Engineering Simulation.

• PROGRAMME OF THE SEMINAR

Monday 23

10.00-13.00	ROSE School Board Meeting
13.00-14.30	Welcome party and registration
14.30-16.00	Session 1 - Chairman: G.M. Calvi M.J.N. Priestley and A.D. Amaris* *Dynamic amplification of seismic moments and shear forces in walls and frames* M.A. Lopez* and R. Pinho *3D adaptive pushover of reinforced concrete buildings*
16.00-16.30	Coffee break
16.30-18.00	Session 2 - Chairman: M.J.N. Priestley P. Ceresa*, C. Casarotti*, G.M. Calvi, F. Auricchio and D. Bolognini *Effects of axial force variation in the seismic response of bridges isolated with friction pendulum systems* D. Grant* and G.L. Fenves *Bi-directional modelling of elastomeric isolation bearings*
20.30-23.30	ROSE Seminar Dinner

Tuesday 24

9.30-11.00	Session 3 - Chairman: A. Pecker A.B. Acevedo*, J.J. Bommer *Seismological criteria for selecting and scaling real accelerograms for use in engineering analysis and design* S. Peloso* and A. Pavese *FRP retrofitting of square hollow piers*
11.00-11.30	Coffee Break
11.30-13.00	Session 4 - Chairman: A.S. Elnashai H.M. Crowley* and R. Pinho *Periods of vibration for displacement-based assessment of RC buildings* G. Lupoi*, G.M. Calvi and P.E. Pinto *Limitations and performances of different approaches for seismic assessment of existing buildings*
13.00-14.30	Lunch break
14.30-16.00	Keynote lecture - D.M. Boore *Can site response be predicted?*
16.00-17.00	Graduation ceremony Programme of future activities Closing speeches

*ROSE School student

• ROSE FACULTY

Aiming at a unique diversity of teaching and research training in the field of Earthquake Engineering, the organisation of the ROSE School is based on a relatively short permanence of scholars with extremely high qualification. Indeed, all lecturers at the School are internationally recognised experts in the field, coming from a number of distinguished institutions from around the world, as listed below:

G.M. Calvi	ROSE School, Director
M.J.N. Priestley	ROSE School, Director
N. Abrahamson	Pacific Gas & Electricity Company, USA
D.P. Abrams	University Illinois, Urbana-Champaign, USA
F. Auricchio	Università degli Studi di Pavia, Italy
G. Ballio	Politecnico di Milano, Italy
K.J. Bathe	MIT, Cambridge, USA
J. Berril	University of Canterbury, New Zealand
J.J. Bommer	Imperial College, London, UK
D.M. Boore	US Geological Survey, California, USA
F. Brezzi	Università degli Studi di Pavia, Italy
F. Carli	Università degli Studi di Pavia, Italy
E.C. Carvalho	LNEC, Lisbon, Portugal
M.P. Collins	University of Toronto, Canada
A. Cornell	Stanford University, USA
E. Cosenza	Università di Napoli "Federico II", Italy
A. Der Kiureghian	University of California at Berkeley, USA
A. Elnashai	University Illinois, Urbana-Champaign, USA
M.N. Fardis	University of Patras, Greece
G.L. Fenves	University of California at Berkeley, USA
A. Filiatrault	University of California at San Diego, USA
L. Gambarotta	Università degli Studi di Genova, Italy
P. Gasparini	Università di Napoli "Federico II", Italy
T.J.R. Hughes	Stanford University, USA
I.M. Idriss	University of California at Davis, USA
K. Kawashima	Tokyo Institute of Technology, Japan
M.J. Kowalsky	North Carolina State University, USA
C.G. Lai	Politecnico di Torino, Vercelli, Italy
G. Macchi	Università degli Studi di Pavia, Italy
G. Magenes	Università degli Studi di Pavia, Italy
N. Makris	University of California at Berkeley, USA
G. Martin	University of Southern California, USA
M. Nakashima	University of Kyoto, Japan
T.D. O'Rourke	Cornell University, USA
S. Otani	University of Tokyo, Japan
V. Pane	Università degli Studi di Perugia, Italy
A. Pavese	Università degli Studi di Pavia, Italy
A. Pecker	Ecole Nat. des Ponts et Chaussees, France
M.J. Pender	University of Auckland, New Zealand
R. Pinho	ROSE School, Pavia, Italy
A. Pinto	ELSA, Joint Research Centre, Ispra, Italy
P.E. Pinto	Università di Roma "La Sapienza", Italy
J. Restrepo	University of California at San Diego, USA
F. Sabetta	Servizio Sismico Nazionale, Roma, Italy
F. Seible	University of California at San Diego, USA
E. Spacone	University of Chieti, Italy
D. Veneziano	MIT, Cambridge, USA

The University Institute for Advanced Studies (IUSS) was founded in 1997 by the University of Pavia and the Italian Ministry of Universities and Research, to provide advanced training and education at undergraduate and post-graduate levels. Within this framework, the aim of the European School of Advanced Studies in Reduction of Seismic Risk (ROSE) is to prepare professionals and researchers in the field of Earthquake Engineering, to meet the ever-growing worldwide demand for expertise in this specialised subject.

ROSE **SCHOOL**

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The European Commission has attributed to the ROSE School the status of Marie Curie Training Site, acknowledging the high quality of its earthquake engineering training programme. The signed agreement provides funds that allow the financing of postgraduate scholarships with a duration of 3 to 12 months. The bursaries, with a value of 1200_/month, may be awarded to PhD students currently undertaking research work on earthquake engineering related topics, who might wish to spend a relatively short period of time at the ROSE School, attending taught courses or carrying out research work under the supervision of one of the Faculty members. Further information and detailed instructions on how to submit an application can be found at the ROSE School website, indicated above.

Grafica Cardano - Pavia Italy